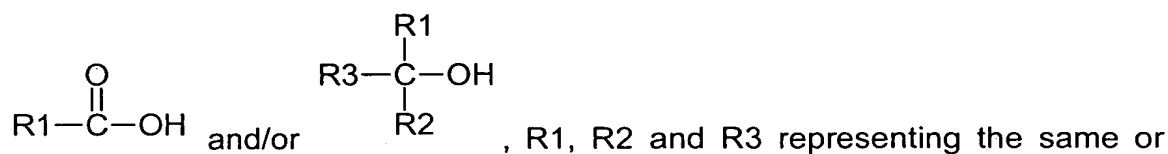
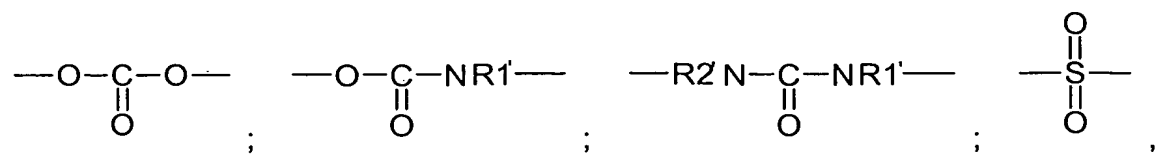


Patent claims:

1. Elastomer material based on N-alkylaziridino compounds with a base component which contains the aziridino compounds and with a catalyst component which contains at least one acid-acting compound, both components being mixed before use, characterized in that as acid-acting compound of the catalyst component, one or more boric acid complexes are used which can be obtained by reaction of boric acid and/or a boric acid derivative with at least one OH-functional compound, the OH functions being able to be present wholly or partly protected, and this reaction being carried out either as an upstream reaction between boric acid and/or a boric acid derivative and at least one such OH-functional compound or during or after the preparation of the catalyst component or by mixing the catalyst component with the base component which then contains at least one such OH-functional compound, and the at least one OH-functional compound containing at least one and up to 10 OH groups and having the general structural formula



atoms can be replaced by $—O—$; $—S—$; $\begin{array}{c} \diagup \\ C=O \\ \diagdown \end{array}$; $\begin{array}{c} —O—C— \\ \parallel \\ O \end{array}$;

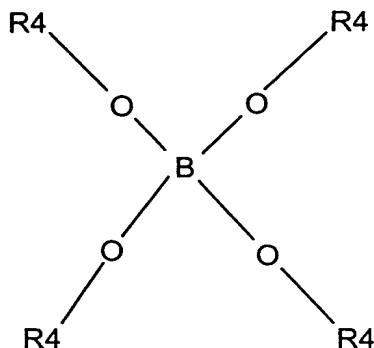


R1' and R2' being the same or different and aliphatic, cycloaliphatic, aromatic or araliphatic bivalent radicals with 1 to 30 C atoms.

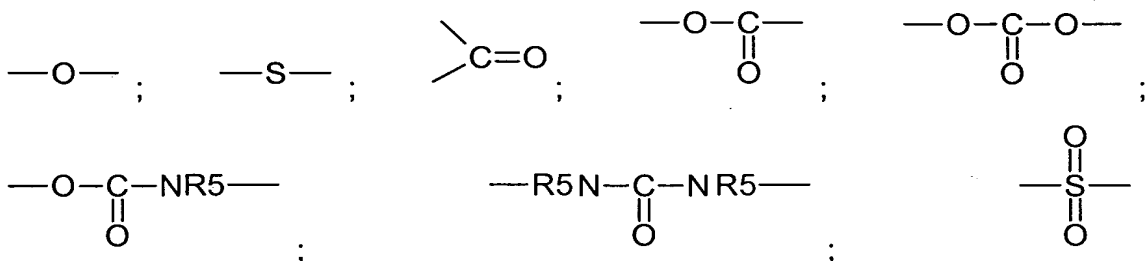
2. Elastomer material according to claim 1, characterized in that the curing of the aziridino compounds takes place through boric acid complexes

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which correspond to the following general structural formula,



in which the substituents R4 can be different or the same or bridged with each other and R4 can mean: hydrogen, an aliphatic, cycloaliphatic, aromatic or araliphatic radical with 1 to 30 C atoms and one or more C atoms can be replaced by



in which R5 is hydrogen or C1 to C12 alkyl and R4 and also R5 can carry one or more halogens, -CN, -OH, -SH, -COOH, -COO(C₁₋₁₈ alkyl), -NO₂, SO₃H, alkylthio-, keto- and also aldehyde groups as substituents.

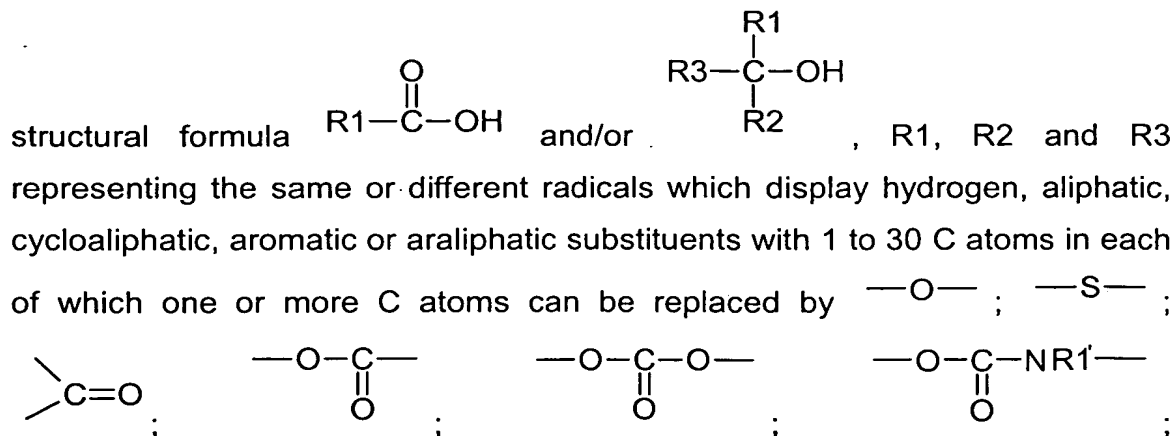
3. Elastomer material according to one of claims 1 to 2, characterized in that the catalyst component contains 0.1 to 100 wt.-% of boric acid complexes with OH-functional compounds optionally in an excess of these OH-functional compounds.
4. Elastomer material according to one of claims 1 to 3, characterized in that the ratio of number of mols of boron in the catalyst component to the number of aziridino equivalents in the mixed preparation is 1 : 1 to 1 : 20.

5. Elastomer material according to one of claims 1 to 4, characterized in that the boric acid complexes are prepared by reaction of boric acid or boric acid derivatives with compounds which contain at least two OH groups or in that the boric acid complexes are prepared by reaction of boric acid esters with compounds which contain at least two OH groups.
6. Elastomer material according to one of claims 1 to 5, characterized in that the reaction of the boric acid or the boric acid derivative with the OH-functional compounds is carried out before the formulation of the catalyst component and the ester-like boric acid complex is used as a constituent of the catalyst component, or in that the reaction of the boric acid or the boric acid derivative with the OH-functional compounds takes place during the formulation of the catalyst component, or in that the reaction of the boric acid or the boric acid derivative with the OH-functional compounds takes place during and after the mixing of the catalyst component with the base component.
7. Elastomer material according to one of claims 1 to 6, characterized in that the formation of the curing-triggering boric acid complex takes place during and/or after the mixing of the catalyst component with the base component from a boric acid derivative of the catalyst component and at least one OH-functional compound with at least 2 OH groups of the base component.
8. Elastomer material according to one of claims 1 to 7, characterized in that the formation of the curing-triggering boric acid complex takes place during and/or after the mixing of the catalyst component with the base component at least partly from a boric acid derivative, preferably a boric acid ester, of the catalyst component and at least one OH-functional compound of the base component.
9. Elastomer material according to one of claims 1 to 8, characterized in that a molar ratio between boric acid and the OH-functional compounds of 1 : 0.1 to 1 : 10, preferably 1 : 1 to 1 : 4 and particularly preferably of 1 : 1.5 to 1 : 3 is established.

10. Elastomer material according to one of claims 1 to 9, characterized in that, as complexing agent for the boric acid, OH-functional organic compounds are used which contain at least one 1,2-dihydroxy and/or at least one 1,3-dihydroxy group.
- 5
11. Elastomer material according to one of claims 1 to 10, characterized in that OH-functional complexing agents are used which have at least one phenolic OH group.
- 10
12. Elastomer material according to claim 11, characterized in that, as complexing agent, pyrocatechol or 2,3-dihydroxynaphthalene is used, the phenyl radical(s) optionally being able to contain further substituents such as alkyl, halide, alkyl ester, alkyl ether, carboxyl and/or hydroxyl, or in that salicylic alcohol is used as complexing agent, the phenyl radical optionally being able to contain further substituents such as alkyl, halide, alkyl ester, alkyl ether, carboxyl and hydroxyl.
- 15
13. Elastomer material according to one of claims 1 to 12, characterized in that, as complexing agent, α -hydroxycarboxylic acids and preferably glycolic acid, mandelic acid and benzilic acid are used.
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14. Elastomer material according to one of claims 1 to 13, characterized in that, as complexing agents, compounds with protected and preferably silylated OH groups are used.
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15. Elastomer material according to one of claims 1 to 14, characterized in that several complexing agents are used.
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16. Elastomer material according to one of claims 1 to 15, characterized in that combinations of boric acid complexes with varying structure and composition are used.

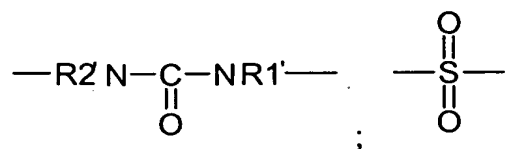
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17. Elastomer material according to claim 16, characterized in that, as complexing agent, 4-tert.-butylpyrocatechol is used in combination with an aliphatic OH-functional compound.
18. Elastomer material according to one of claims 1 to 17, characterized in that the boric acid complexes are used together with other starters and preferably with sulphonium starters.
19. Process for the preparation of elastomer materials based on N-alkylaziridino compounds with a base component which contains the aziridino compounds and with a catalyst component which contains at least one acid-acting compound, both components being mixed before use, characterized in that as acid-acting compound of the catalyst component, one or more boric acid complexes are used which can be obtained by reaction of boric acid and/or a boric acid derivative with at least one OH-functional compound, the OH functions being able to be present wholly or partly protected, and this reaction being carried out either as an upstream reaction between boric acid and/or a boric acid derivative and at least one such OH-functional compound or during or after the preparation of the catalyst component or by mixing the catalyst component with the base component which then contains at least one such OH-functional compound and the at least one OH-functional compound containing at least one and up to 10 OH groups and having the general



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, R¹' and R²' being the same or different and aliphatic, cycloaliphatic, aromatic or araliphatic bivalent radicals with 1 to 30 C atoms.

- 5 20. Use of elastomer materials according to one of claims 1 to 18 for dental modelling, as bite-registration materials or as doubling materials.

21. Kit which contains the base component and the catalyst component according to one of claims 1 to 18 separately from each other.

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